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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/472,993	12/28/1999	MITSUYA SATO	684.2948	9453

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EXAMINER

BROWN, KHALED

ART UNIT PAPER NUMBER

2851

DATE MAILED: 05/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/472,993

Applicant(s)

MITSUYA SATO

Examiner

Khaled Brown

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,5-11,15 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-11,15 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,5-11,15 and 18 are still rejected under 35 U.S.C. 102(b) as being anticipated by Nishi et al (US 5591958).

Re clms 1: Nishi et al discloses a photodetector (54), disposed at a position optically conjugate with the original (12), for detecting information regarding the original and for producing an output; storing means (22a) for storing correction information with respect to the output of said photodetector, in relation to different positions of the original to be illuminated with the exposure light; and a correction device (25) for receiving correction information stored in said storage means and correcting, in the lithographic pattern transfer, the output of said photodetector by use of the stored correction information.

Re clm 2: correction information (Col 11 lines 26-28)

Re clm 5: a first photodetector (46), disposed at a position optically conjugate with the original (12), for detecting information regarding the original and for producing an output; a second photodetector (54) for detecting reflection light from the original and for producing an output; storing means (22a) for storing correction information with respect to the output of said first photodetector in relation to different positions of the original, on

the basis of the outputs of said first and second photodetectors; and a correction device (25) receiving the correction information stored in said storing means and for correcting, in the lithographic pattern transfer, the output of said first photodetector by use of the correction information.

Re clm 6: an illumination optical system (47, 48) for illuminating an original with exposure light output from a light source (23); a projection optical system (8) for projecting a pattern of the original, illuminated by the illumination optical system, onto a substrate (5); a photodetector (54), disposed at a position optically conjugate with the original, for detecting information regarding the original and for producing an output; control means (22a) for controlling the exposure light output from the light source on the basis of the output of the photodetector; and correcting means (25) for reducing an influence of reflection light from the original, on the basis of the output of the photodetector as the original is illuminated by the illumination optical system.

Re clm 8: the correcting means includes reflection light detecting means for detecting reflection light from the original, as illuminated by said illumination optical system, and being directed back to said illumination optical system, and wherein said correcting means operates to reduce or remove the influence of the reflection light, while referring to a result of the detection by said reflection light detecting means (Col 11 lines 20-38).

Re clm 9: Scan type apparatus is disclosed (Col 1 line 13).

Re clm 15, 18: reflection from the substrate (Col 11 lines 33-34)

### ***Response to Arguments***

Applicant's arguments filed 2-12-02 have been fully considered but they are not persuasive. The applicant argues that the reflection sensor of Nishi et al is not optically conjugate with the original and that the measured information does not only pertain to a slit shaped exposure region. However, the reflection sensor of Nishi et al is optically conjugate with the original and the measured information does only pertain to a slit shaped exposure region (Lw as shown in Fig 1).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miyai et al 5581324 and Magome 5004348.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khaled Brown whose telephone number is 703-306-5738. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell E. Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

KB  
May 14, 2002

  
RUSSELL ADAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800